

TROPICAL RAINFALL MEASURING MISSION

July 25, 1999 - August 1, 1999

DOY 207 - 213

Day of Mission 606 - 612

TRMM MISSION OPERATIONS

- TRMM is flying in the +X Forward direction as of 99-196, at 10:18:07z.
- The next Yaw maneuver is scheduled for August 15th (99-227).
- Delta-V maneuver #113 is scheduled for August 2nd (99-214) using the LBS thrusters.
- The Beta angle range for DOY 214 to 220 is 52.1° to 27.6°.

TRMM SUBSYSTEM OPERATIONS

Attitude Control System

Delta-V maneuver #112 was successfully conducted on 99-209 at 14:48:22z and 15:37:00z, for durations of 48.5 and 25.750 seconds respectively, using the LBS thrusters. The off-modulation of the -Yaw thruster (#1) for burn 1 was 7.5% (92.5% on time). The off-modulation of the +Pitch thruster (#2) was 24.2% and 27.2% respectively for burn 1 and 2 (75.8% and 72.8% on time). The remaining fuel is 708.476 kg and the final apogee and perigee height is 354.63 km x 347.56 km.

The ESA experienced Sun interference in quadrants 1 and 3 during 99-207 through 99-213 and Moon interference in quadrants 2 and 4 during 99-207 through 99-212. The ACS performed nominally during the transitions between 2, 3, and 4 head control.

Flight Data System (FDS)/Command & Data Handling (C&DH)

The frequency standard continues to drift in the negative direction. The frequency remains x'765', with a current drift rate of -2.79 μ s/hr. The UTCF was adjusted -877 μ s on 99-210 at 22:52:18z to a new value of 31535996.861549 sec with a current drift value of -200 μ s.

Q-Channel restarts occurred on 99-210 at 01:36:10z and 99-212 at 04:04:44z.

EDAC multi-bit errors occurred on 99-208 at 15:01:28z and 99-211 at 04:13:39z.

Invalid stream id received from VIRS on 99-211 at 04:58:44z.

Reaction Control Subsystem (RCS)

The RCS subsystem performed nominally during this period. See the ACS section for specific Delta-V information.

Power Subsystem

The Power subsystem is operating nominally.

Electrical Subsystem

The Electrical subsystem operated nominally during this period.

Thermal Subsystem

The Thermal subsystem operated nominally during this period.

Deployables Subsystem

The Deployables subsystem performed nominally during this period.

RF/Communications Subsystem

The RF/Communications subsystem performed nominally during this period.

SPACECRAFT INSTRUMENTS

CERES

CERES personnel are developing a plan for operating the instrument with the +15 V DAA anomaly. Work continues in creating and testing TSMs to monitor the CERES current. RTS testing has been completed.

LIS

LIS performed nominally during this time period.

PR

PR performed nominally during this time period. The list of Internal Calibration times in which PR was not radiating is listed below:

1999:207:09:50:45-09:52:56z
1999:208:02:08:27-02:13:32z
1999:209:09:01:26-09:03:35z
1999:210:01:19:36-01:23:31z
1999:210:07:50:04-07:52:18z
1999:211:08:08:54-08:15:01z
1999:212:07:01:18-07:03:30z
1999:212:23:21:04-23:23:40z
1999:213:07:23:50-07:25:56z

PR performed External calibration operations on 99-207 at 18:00:42z using beam #36 and 99-208 at 16:48:00z using beam #35.

TMI

TMI performed nominally during this time period.

VIRS

VIRS performed nominally during this time period.

GROUND SYSTEM

Y2K testing has been completed on string 3. String 3 operational readiness testing will be performed after completion of rollover testing. String 2 remains the prime Mission Planning string for normal spacecraft operations.

The tape drive on string-1 was replaced on 99-208.

ER #113: On 99-208 prior to the 23:10z support, string-1 experienced problems with the front-end. The support was taken on string-2.

ER #107: On 99-213, OPM-66 USCCS Clock Correlation messages were not received at the MOC, even though WSC showed the messages leaving at their end.

The file transfer problem to the LaRC workstations was corrected on the GSFC gatekeeper on 99-211.

Event Reports

#107 - OPM-66 messages (USCCS Clock Avg Fine Delta) not received for several events.

#113: Multiple workstations on string-1 crash

Generic Late Acquisition Reports (for TTRs 19639)

No Late Acquisition Reports were opened this week.

New Anomaly

No new Anomaly Reports were opened during this week.

Recurring Open Anomalies

There were no recurring open anomalies during this week.

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